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Test 2109: John Deere 9470R

Nebraska Tractor Test Laboratory

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NEBRASKA OECD TRACTOR TEST 2109—SUMMARY 972

JOHN DEERE 9470R DIESEL

18 SPEED

POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft speed rpm	Diesel Consumption Gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	D.E.F. Consumption Gal/hr (l/h)	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION						
SEE NOTE 1 - PAGE 2						
Rated Engine Speed—(PTO speed—1108 rpm)						
334.90 (249.73)	2099	20.58 (77.91)	0.432 (0.263)	16.27 (3.21)	0.37 (1.39)	Fuel used during active exhaust regeneration-2.89 gal (10.95 l) (see note 2, p.2)
Standard Power Take-off Speed(1000 rpm)						
365.75 (272.74)	1895	20.72 (78.43)	0.398 (0.242)	17.65 (3.48)	0.32 (1.23)	
Maximum Power (1 hour)						
370.82 (276.52)	1700	20.10 (76.09)	0.381 (0.232)	18.45 (3.63)	0.36 (1.35)	

VARYING POWER AND FUEL CONSUMPTION

334.90 (249.73)	2099	20.58 (77.91)	0.432 (0.263)	16.27 (3.21)	0.37 (1.39)	Air temperature
291.50 (217.37)	2150	19.09 (72.27)	0.461 (0.280)	15.27 (3.01)	0.36 (1.36)	75°F (24°C)
218.58 (162.99)	2150	15.83 (59.91)	0.509 (0.310)	13.81 (2.72)	0.31 (1.17)	Relative humidity
145.62 (108.59)	2149	12.51 (47.35)	0.604 (0.368)	11.64 (2.29)	0.27 (1.01)	19%
72.72 (54.22)	2150	9.46 (35.80)	0.915 (0.556)	7.69 (1.51)	0.20 (0.75)	Barometer
0.53 (0.39)	2150	6.83 (25.86)	90.720 (55.183)	0.08 (0.02)	0.11 (0.42)	28.57" Hg (96.75 kPa)

Maximum Torque - 1236 lb.-ft. (1676 Nm) at 1550 rpm

Maximum Torque Rise - 47.5%

Torque rise at 1681 engine rpm - 38%

Power increase at 1700 rpm - 10.7%

DRAWBAR PERFORMANCE (Unballasted)

FUEL CONSUMPTION CHARACTERISTICS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	D.E.F. Consumption lb/hp.hr (kg/kW.h)	Temp. °F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
Maximum Power—7th Gear- Manual mode										
370.40 (276.20)	29192 (129.85)	4.76 (7.66)	2100	3.5	0.443 (0.270)	15.87 (3.13)	0.013 (0.008)	196 (91)	70 (21)	28.95 (98.04)
75% of Pull at Maximum Power—7th Gear - Manual mode										
289.90 (216.18)	21903 (97.43)	4.96 (7.98)	2166	2.3	0.478 (0.291)	14.70 (2.90)	0.012 (0.007)	191 (88)	68 (20)	28.79 (97.49)
50% of Pull at Maximum Power—7th Gear- Manual mode										
196.26 (146.35)	14591 (64.90)	5.04 (8.11)	2188	1.6	0.567 (0.345)	12.40 (2.44)	0.015 (0.009)	177 (81)	53 (12)	28.60 (96.85)
75% of Pull at Reduced Engine Speed—5.1 mph (8.2 km/h)-Auto mode										
289.51 (215.89)	21663 (96.36)	5.01 (8.06)	1599	2.4	0.406 (0.247)	17.32 (3.41)	0.009 (0.005)	193 (89)	69 (21)	28.79 (97.49)
50% of Pull at Reduced Engine Speed—5.1 mph (8.2 km/h)-Auto mode										
196.27 (146.36)	14610 (64.99)	5.04 (8.11)	1300	1.6	0.418 (0.255)	16.81 (3.31)	0.012 (0.007)	186 (86)	54 (12)	28.59 (96.82)

Location of Tests: Nebraska Tractor Test Laboratory, University of Nebraska, Lincoln, Nebraska 68583-0832

Dates of Tests: April 14 - 28, 2015

Manufacturer: John Deere Tractor Works, 3500 East Donald St., P.O. Box 270, Waterloo Ia, 50704-0270

CONSUMABLE Fluids, OIL and TIME: Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F (15°/15°C)** 0.8447 **Fuel weight** 7.033 lbs/gal (0.843 kg/l) **Diesel Exhaust Fluid (DEF)** 32% aqueous urea solution **DEF weight** 9.071 lbs/gal (1.087 kg/l) **Oil SAE 10W-30 API service classification** CJ-4 **Transmission, hydraulic and final drive lubricant** John Deere Hy-Gard fluid **Total time engine was operated:** 37.5 hours

ENGINE: Make John Deere **Diesel Type** six cylinder vertical with two turbochargers, air to air aftercooler and D.E.F. (diesel exhaust fluid) exhaust treatment **Serial No.** *RG6135U002068* **Crankshaft** lengthwise **Rated engine speed** 2100 **Bore and stroke** 5.197" x 6.496" (132.0 mm x 165.0 mm) **Compression ratio** 16.0 to 1 **Displacement** 826 cu in (13548 ml) **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements and aspirator **Oil filter** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for transmission/ hydraulic oil also feeding front and rear axles **Fuel filter** two paper cartridges **Fuel cooler** radiator for returned fuel **Exhaust** DOC (diesel oxidation catalyst), SCR (selective catalyst reduction) and regenerative DPF (diesel particulate filter) integrated within a vertical muffler **Cooling medium temperature control** 3 thermostats and variable speed fan

ENGINE OPERATING PARAMETERS: Fuel rate: Stationary PTO operation (395 engine hp) 137.3 - 148.8 lb/h (62.3 - 67.5 kg/h), (420 engine hp) 143.1 - 154.8 lb/h (66.4 - 71.9 kg/h), (445 engine hp) 151.5 - 163.8 lb/h (68.7 - 74.3 kg/h), (470 engine hp) 159.8 - 172.8 lb/h (72.5 - 78.4 kg/h) **High idle:** 2150 - 2250 rpm (2125 - 2175 rpm with PTO engaged) **Turbo boost:** (470 engine hp) nominal 31.2 - 34.8 psi (215 - 240 kPa) as measured 33.0 psi (228 kPa)

CHASSIS: Type four wheel drive with triples **Serial No.** *1RW9470RCEP016029* **Tread width** rear 59.1" (1500 mm) to 163.8" (4160 mm), front 59.1" (1500 mm) to 163.8" (4160 mm) **Wheelbase** 137.8" (3500 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with full range operator controlled power shift **Nominal travel speeds mph (km/h)** first 2.37 (3.81) second 2.91 (4.69) third 3.23 (5.19) fourth 3.60 (5.79) fifth 3.96 (6.38) sixth 4.42 (7.12) seventh 4.90 (7.89) eighth 5.47 (8.81) ninth 6.03 (9.71)

DRAWBAR PERFORMANCE

(Unballasted at 2100 rpm, Manual mode)

MAXIMUM POWER IN SELECTED GEARS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	D.E.F Consumption lb/hp.hr (kg/kW.h)	Temp.°F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
263.46 (196.46)	47808 (212.66)	2.07 (3.33)	2126	14.2	1st Gear 0.544 (0.331)	12.93 (2.55)	0.011 (0.007)	186 (86)	44 (7)	28.59 (96.82)
301.28 (224.66)	40879 (181.84)	2.76 (4.44)	2099	5.7	2nd Gear 0.478 (0.291)	14.72 (2.90)	0.010 (0.006)	190 (88)	48 (9)	28.59 (96.82)
309.16 (230.54)	37720 (167.79)	3.07 (4.94)	2099	5.1	3rd Gear 0.465 (0.283)	15.14 (2.98)	0.010 (0.006)	193 (89)	69 (21)	28.77 (97.43)
329.24 (245.51)	35824 (159.35)	3.45 (5.55)	2100	4.7	4th Gear 0.457 (0.278)	15.40 (3.03)	0.010 (0.006)	192 (89)	72 (22)	28.76 (97.39)
347.59 (259.19)	34231 (152.27)	3.81 (6.13)	2099	4.4	5th Gear 0.451 (0.274)	15.60 (3.07)	0.011 (0.007)	193 (89)	69 (21)	28.94 (98.00)
367.54 (274.07)	32174 (143.12)	4.29 (6.90)	2099	4.0	6th Gear 0.448 (0.273)	15.69 (3.09)	0.013 (0.008)	193 (89)	69 (21)	28.95 (98.04)
370.40 (276.20)	29192 (129.85)	4.76 (7.66)	2100	3.5	7th Gear 0.443 (0.270)	15.87 (3.13)	0.013 (0.008)	196 (91)	70 (21)	28.95 (98.04)
372.84 (278.03)	26283 (116.91)	5.32 (8.56)	2099	3.1	8th Gear 0.443 (0.269)	15.89 (3.13)	0.011 (0.007)	192 (89)	62 (16)	28.97 (98.10)
370.43 (276.23)	23482 (104.45)	5.92 (9.53)	2100	2.5	9th Gear 0.445 (0.271)	15.80 (3.11)	0.012 (0.007)	192 (89)	66 (19)	28.97 (98.10)
371.49 (277.02)	21145 (94.06)	6.59 (10.61)	2099	2.1	10th Gear 0.444 (0.270)	15.83 (3.12)	0.013 (0.008)	193 (89)	66 (19)	28.97 (98.10)
370.83 (276.53)	19049 (84.73)	7.30 (11.75)	2099	1.8	11th Gear 0.443 (0.270)	15.86 (3.12)	0.013 (0.008)	194 (90)	67 (20)	28.97 (98.10)
370.81 (276.51)	17080 (75.98)	8.14 (13.10)	2100	1.6	12th Gear 0.444 (0.270)	15.84 (3.12)	0.013 (0.008)	194 (90)	68 (20)	28.96 (98.07)

TRACTOR SOUND LEVEL WITH CAB

	dB(A)
At no load in 7th gear	70.9
Transport speed - no load - 18th gear	72.0
Bystander in 18th gear	86.9

TIRES, BALLAST AND WEIGHT

	With Ballast	Without Ballast
Rear Tires - No., size, ply & psi(kPa)	Six 480/80R46;***;12(85)	Six 480/80R46;***;12(85)
Ballast - Liquid (total)	None	None
- Cast Iron (total)	4020 lb (1823 kg)	None
Front Tires - No., size, ply & psi(kPa)	Six 480/80R46;***;16(110)	Six 480/80R46;***;13(90)
Ballast - Liquid (total)	None	None
- Cast Iron (total)	3430 lb (1556 kg)	None
Height of Drawbar	21.0 in (570 mm)	21.0 in (535 mm)
Static Weight with operator - Rear	24205 lb (10979 kg)	20185 lb (9156 kg)
- Front	29035 lb (13170 kg)	25605 lb (11614 kg)
- Total	53240 lb (24149 kg)	45790 lb (20770 kg)

tenth 6.74 (10.84) eleventh 7.46 (12.01) twelfth 8.25 (13.27) thirteenth 9.18 (14.77) fourteenth 10.15 (16.33) fifteenth 12.54 (20.18) sixteenth 15.43 (24.83) seventeenth 19.08 (30.70) eighteenth 23.48 (37.78) reverse 2.37 (3.81), 3.23 (5.19), 3.60 (5.79), 4.90 (7.89), 5.47 (8.81), 7.46 (12.00) **Clutch** wet multiple disc hydraulically actuated by a foot pedal **Brakes** wet multiple disc hydraulically actuated by a foot pedal **Steering** hydrostatic and articulated **Power take-off** 1000 rpm at 1895 engine rpm **Unladen tractor mass** 45615 lb (20690 kg)

REPAIRS AND ADJUSTMENTS: Lube pressure switch replaced.

NOTE 1. In stationary PTO operation, this model operates in a derated power mode. With stationary PTO operation, using FieldCruise™, an isochronous governor is utilized. All PTO tests were conducted with FieldCruise™ engaged.

NOTE 2. The manufacturer declares that the average time between active regenerations is 50 hours, while operated in Auto Filter Cleaning Mode, at rated speed, full PTO load, under steady state conditions.

NOTE 3. The 9470R engine has an electronic control system which provides a vehicle protection system to avoid overloading the drive train. This system provides four different engine power levels. At 2100 rpm the engine produces up to 395 hp when the transmission is in forward gears 1 through 3. The engine produces 420 hp in gear 4 and 445 hp in gear 5. The engine produces 470 hp at 2100 rpm for all other gears.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD, SAE and Nebraska test procedures. The performance figures on this summary were taken from a test conducted under the OECD Code 2 test procedure.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **2109**, Nebraska Summary 972, July 5, 2015.

Roger M. Hoy
Director

M.F. Kocher
J.D. Luck
P.J. Jasa
Board of Tractor Test Engineers

DRAWBAR PERFORMANCE
UNBALLASTED - AUTO MODE
(Loads based on 2100 engine rpm manual mode performance runs)
DRAWBAR POWER AT SELECTED TRAVEL SPEEDS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption		D.E.F. Consumption	Temp. °F (°C)		Barom. inch Hg (kPa)
					lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	lb/hp.hr (kg/kW.h)	cool- ing med	Air dry bulb	
2.2 mph (3.6 km/h)										
256.34 (191.15)	47405 (210.87)	2.03 (3.27)	1461	10.0	0.436 (0.266)	16.11 (3.17)	0.011 (0.007)	191 (88)	46 (8)	28.59 (96.82)
2.9 mph (4.6 km/h)										
301.03 (224.47)	41634 (185.19)	2.71 (4.36)	1669	5.8	0.419 (0.255)	16.77 (3.30)	0.009 (0.006)	191 (88)	49 (9)	28.60 (96.85)
3.2 mph (5.2 km/h)										
308.83 (230.29)	37519 (166.89)	3.09 (4.97)	1715	5.1	0.418 (0.254)	16.83 (3.31)	0.008 (0.005)	195 (90)	70 (21)	28.77 (97.43)
3.6 mph (5.8 km/h)										
328.96 (245.31)	35663 (158.64)	3.46 (5.57)	1711	4.6	0.419 (0.255)	16.79 (3.31)	0.009 (0.005)	196 (91)	71 (21)	28.75 (97.36)
4.0 mph (6.4 km/h)										
347.33 (259.00)	34055 (151.48)	3.82 (6.15)	1706	4.4	0.410 (0.249)	17.15 (3.38)	0.010 (0.006)	199 (93)	70 (21)	28.92 (97.93)
4.5 mph (7.2 km/h)										
367.80 (274.27)	31845 (141.65)	4.33 (6.97)	1728	3.9	0.405 (0.246)	17.37 (3.42)	0.010 (0.006)	199 (93)	70 (21)	28.94 (98.00)
4.8 mph (7.8 km/h)										
370.30 (276.13)	29472 (131.10)	4.71 (7.58)	1690	3.6	0.406 (0.247)	17.32 (3.41)	0.010 (0.006)	203 (95)	70 (21)	28.94 (98.00)
5.3 mph (8.6 km/h)										
371.78 (277.24)	26387 (117.38)	5.28 (8.50)	1695	3.1	0.405 (0.246)	17.38 (3.42)	0.009 (0.005)	195 (91)	64 (18)	28.97 (98.10)
6.0 mph (9.6 km/h)										
370.19 (276.05)	23706 (105.45)	5.86 (9.43)	1872	2.6	0.418 (0.254)	16.82 (3.31)	0.009 (0.006)	194 (90)	66 (19)	28.97 (98.10)
6.7 mph (10.8 km/h)										
371.56 (277.07)	21067 (93.71)	6.61 (10.64)	1906	2.1	0.420 (0.255)	16.76 (3.30)	0.010 (0.006)	194 (90)	67 (19)	28.97 (98.10)
7.5 mph (12.0 km/h)										
370.23 (276.08)	18856 (83.87)	7.36 (11.84)	1903	1.7	0.417 (0.254)	16.86 (3.32)	0.010 (0.006)	195 (91)	68 (20)	28.97 (98.10)
8.2 mph (13.2 km/h)										
370.62 (276.37)	17115 (76.13)	8.12 (13.07)	1890	1.5	0.423 (0.257)	16.62 (3.27)	0.010 (0.006)	198 (92)	68 (20)	28.96 (98.07)

DRAWBAR PERFORMANCE
(Unballasted at 1800 RPM, Manual mode)
MAXIMUM POWER IN SELECTED GEARS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	D.E.F. Consumption lb/hp.hr (kg/kW.h)	Temp.°F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
1st Gear										
263.71 (196.64)	47849 (212.84)	2.07 (3.33)	2125	14.5	0.537 (0.327)	13.09 (2.58)	0.011 (0.007)	185 (85)	44 (7)	28.59 (96.82)
2nd Gear										
319.61 (238.33)	46777 (208.07)	2.57 (4.13)	2015	10.1	0.471 (0.287)	14.93 (2.94)	0.010 (0.006)	191 (88)	47 (9)	28.60 (96.85)
3rd Gear										
339.18 (252.92)	45303 (201.52)	2.81 (4.52)	1968	7.9	0.446 (0.272)	15.75 (3.10)	0.010 (0.006)	191 (88)	49 (9)	28.60 (96.85)
4th Gear										
364.38 (271.71)	44110 (196.21)	3.10 (4.99)	1929	6.8	0.436 (0.265)	16.11 (3.17)	0.009 (0.006)	193 (89)	50 (10)	28.61 (96.88)
5th Gear										
393.21 (293.21)	43582 (193.86)	3.39 (5.45)	1911	6.6	0.428 (0.260)	16.43 (3.24)	0.010 (0.006)	194 (90)	51 (11)	28.61 (96.88)
6th Gear										
415.63 (309.94)	42666 (189.79)	3.66 (5.88)	1838	6.2	0.423 (0.257)	16.62 (3.27)	0.009 (0.005)	197 (92)	51 (10)	28.61 (96.88)
7th Gear										
423.20 (315.58)	39766 (176.89)	3.99 (6.42)	1801	5.4	0.412 (0.251)	17.06 (3.36)	0.009 (0.006)	200 (93)	52 (11)	28.61 (96.88)
8th Gear										
425.41 (317.22)	35679 (158.71)	4.47 (7.19)	1800	4.7	0.405 (0.246)	17.37 (3.42)	0.008 (0.005)	205 (96)	68 (20)	28.79 (97.49)
9th Gear										
425.74 (317.47)	31979 (142.25)	4.99 (8.03)	1799	4.0	0.405 (0.247)	17.35 (3.42)	0.008 (0.005)	206 (97)	67 (20)	28.79 (97.49)
10th Gear										
427.46 (318.76)	28700 (127.66)	5.59 (8.99)	1800	3.2	0.403 (0.245)	17.45 (3.44)	0.008 (0.005)	208 (98)	67 (19)	28.79 (97.49)
11th Gear										
427.74 (318.96)	25861 (115.04)	6.20 (9.98)	1800	2.7	0.403 (0.245)	17.44 (3.44)	0.008 (0.005)	208 (98)	65 (19)	28.79 (97.49)
12th Gear										
430.65 (321.13)	23347 (103.85)	6.92 (11.13)	1800	2.4	0.401 (0.244)	17.55 (3.46)	0.008 (0.005)	210 (99)	66 (19)	28.79 (97.49)
13th Gear										
426.20 (317.82)	20805 (92.55)	7.69 (12.37)	1799	2.0	0.406 (0.247)	17.32 (3.41)	0.008 (0.005)	207 (97)	66 (19)	28.79 (97.49)
14th Gear										
428.59 (319.60)	18765 (83.47)	8.57 (13.78)	1800	1.8	0.402 (0.245)	17.49 (3.45)	0.008 (0.005)	212 (100)	67 (20)	28.79 (97.49)

Lugging ability in 11th gear

Crankshaft speed rpm	2098	2000	1901	1800	1699	1600	1300	1100
Pull-lbs (kN)	18953 (84.31)	22321 (99.29)	24367 (108.39)	25903 (115.22)	27171 (120.86)	27940 (124.28)	26986 (120.04)	25431 (113.12)
Increase in pull %	0	18	29	37	43	47	42	34
Power-Hp (kW)	368.93 (275.11)	412.66 (307.72)	427.13 (318.51)	429.10 (319.98)	424.05 (316.21)	410.20 (305.89)	322.15 (240.23)	257.30 (191.87)
Speed-mph (km/h)	7.30 (11.75)	6.93 (11.15)	6.57 (10.57)	6.21 (9.99)	5.85 (9.41)	5.51 (8.87)	4.48 (7.21)	3.79 (6.10)
Slip %	1.8	2.1	2.3	2.5	2.8	2.9	2.8	2.6

DRAWBAR PERFORMANCE
(Ballasted at 1800 RPM, Manual mode)
MAXIMUM POWER IN SELECTED GEARS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	D.E.F. Consumption lb/hp.hr (kg/kW.h)	Temp. °F cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
1st Gear										
296.24 (220.91)	54875 (244.10)	2.03 (3.26)	2046	12.5	0.499 (0.304)	14.08 (2.77)	0.010 (0.006)	187 (86)	49 (10)	28.83 (97.63)
2nd Gear										
334.67 (247.56)	52528 (233.65)	2.39 (3.85)	1881	8.7	0.453 (0.276)	15.52 (3.06)	0.009 (0.005)	191 (88)	52 (11)	28.82 (97.60)
3rd Gear										
349.78 (260.83)	50747 (225.73)	2.59 (4.16)	1819	7.5	0.430 (0.262)	16.35 (3.22)	0.009 (0.005)	193 (89)	55 (13)	28.81 (97.56)
4th Gear										
371.78 (277.23)	48190 (214.36)	2.89 (4.65)	1800	6.7	0.424 (0.258)	16.58 (3.27)	0.009 (0.005)	193 (89)	57 (14)	28.81 (97.56)
5th Gear										
396.61 (295.75)	46474 (206.72)	3.20 (5.15)	1800	6.3	0.417 (0.254)	16.87 (3.32)	0.009 (0.006)	196 (91)	59 (15)	28.81 (97.56)
6th Gear										
418.09 (311.77)	43440 (193.23)	3.61 (5.81)	1801	5.3	0.415 (0.253)	16.93 (3.33)	0.009 (0.005)	201 (94)	60 (15)	28.80 (97.53)
7th Gear										
426.46 (318.01)	39760 (176.86)	4.02 (6.47)	1800	4.4	0.409 (0.249)	17.22 (3.39)	0.009 (0.005)	199 (93)	60 (16)	28.80 (97.53)
8th Gear										
430.14 (320.76)	35863 (159.53)	4.50 (7.24)	1800	3.8	0.404 (0.246)	17.42 (3.43)	0.009 (0.005)	202 (94)	61 (16)	28.80 (97.53)
9th Gear										
428.49 (319.52)	32079 (142.69)	5.01 (8.06)	1799	3.2	0.405 (0.246)	17.38 (3.42)	0.009 (0.005)	204 (96)	61 (16)	28.80 (97.53)
10th Gear										
432.07 (322.19)	28972 (128.87)	5.59 (9.00)	1800	2.8	0.402 (0.245)	17.48 (3.44)	0.009 (0.005)	203 (95)	62 (17)	28.79 (97.49)
11th Gear										
429.64 (320.38)	25961 (115.48)	6.21 (9.99)	1801	2.4	0.403 (0.245)	17.45 (3.44)	0.009 (0.005)	204 (96)	62 (17)	28.79 (97.49)
12th Gear										
432.24 (322.32)	23426 (104.20)	6.92 (11.14)	1800	2.1	0.400 (0.244)	17.57 (3.46)	0.009 (0.005)	206 (97)	62 (17)	28.79 (97.49)
13th Gear										
427.01 (318.42)	20856 (92.77)	7.68 (12.36)	1799	1.8	0.407 (0.248)	17.28 (3.40)	0.009 (0.005)	206 (97)	62 (17)	28.78 (97.46)
14th Gear										
430.01 (320.65)	18835 (83.78)	8.56 (13.78)	1800	1.6	0.402 (0.244)	17.50 (3.45)	0.009 (0.006)	209 (98)	63 (17)	28.78 (97.46)

HYDRAULIC PERFORMANCE

CATEGORY: 4N/4

Quick Attach: Yes

OECD Static test

Maximum force exerted through whole range:	<u>Category 4N</u>	<u>lift cylinders</u>
	16084 lbs(71.5 kN)	(1 x 90 mm and 1x100 mm)
	21408 lbs(95.2 kN)	(2 x 110 mm)
	<u>Category 4</u>	
	15769 lbs(71.0 kN)	(1 x 90 mm and 1x100 mm)
	21384 lbs(94.0 kN)	(2 x 110 mm)

	<u>Base pump</u>	<u>Tandem pump</u>
	<u>three outlet sets</u>	<u>combined</u>
i) Sustained pressure at compensator cutoff:	2850 psi (196 bar)	2881 psi (199 bar)
ii) Pump delivery rate at minimum pressure and rated engine speed:	60.1 GPM (227.5 l/min)	57.2 GPM (216.4 l/min)
Combined flow:	117.3 GPM (443.9 l/min)	

iii) Pump delivery rate at maximum hydraulic power:	60.5 GPM (228.8 l/min)	57.7 GPM (218.5 l/min)
Delivery pressure:	2427 psi (167 bar)	2371 psi (163 bar)
Power:	85.6 HP (63.8 kW)	79.9 HP (59.5 kW)

	<u>3/4" couplers</u>	<u>1/2" couplers</u>
i) Sustained pressure at compensator cutoff:	2909 psi (201 bar)	2884 psi (199 bar)
ii) Pump delivery rate at minimum pressure and rated engine speed:	43.7 GPM (165.5 l/min)	36.5 GPM (138.1 l/min)

iii) Pump delivery rate at maximum hydraulic power:	42.8 GPM (162.2 l/min)	34.6 GPM (131.1 l/min)
Delivery pressure:	2217 psi (153 bar)	2265 psi (156 bar)
Power:	55.4 HP (41.3 kW)	45.8 HP (34.1 kW)

Category 4N

inch mm

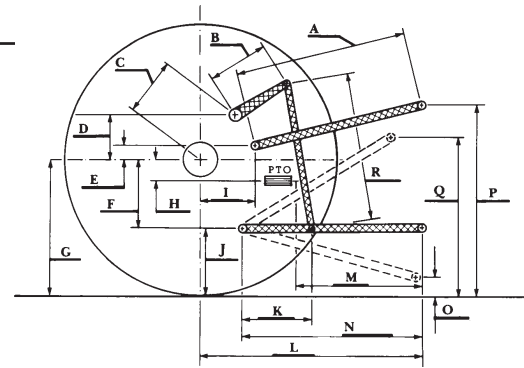
A	31.7	805	30.3	770
B	19.7	500	19.7	500
C	25.0	635	25.0	635
D	24.4	620	24.4	620
E	12.8	325	12.8	325
F	13.8	350	13.8	350
G	36.6	930	36.6	930
H	2.4	60	2.4	60
I	18.7	474	18.7	474
J	22.8	580	22.8	580
K	30.9	785	30.9	785
L	52.8	1342	52.8	1342
*L'	58.7	1491	59.6	1515
M	22.8	579	22.8	579
N	45.6	1159	45.6	1159
O	9.1	230	9.1	230
P	50.8	1290	50.8	1291
Q	41.1	1045	40.9	1040
R	47.0	1195	47.2	1200

*L' to Quick Attach ends

Category 4

inch mm

HITCH DIMENSIONS AS TESTED—NO LOAD



JOHN DEERE 9470R DIESEL